AMENDMENTS TO THE CLAIMS

Presented below is a complete set of claims with current status indicators.

1. (currently amended) ~~A method for adaptively controlling the recording of diagnostic data within an~~ An implantable medical device comprising ~~the steps of~~:

memory; and

a processor operative to:

selectively ~~recording~~ record diagnostic data in memory upon the detection of predetermined recording triggers indicative of circumstances wherein diagnostic data is to be recorded; and

adaptively ~~modifying~~ modify the recording triggers so as to reduce the likelihood of any unnecessary recording of diagnostic data.

2. (currently amended) The ~~method~~ device of claim 1 wherein the diagnostic data to be recorded includes one or more of: intracardiac electrograms (IEGMs) and event records.

3. (currently amended) The ~~method~~ device of claim 1 wherein ~~the step of~~ to selectively ~~recording~~ record diagnostic data ~~includes the steps of~~ the processor is further operative to:

~~inputting~~ receive initial trigger parameters for triggering the recording of diagnostic data;

~~monitoring~~ monitor cardiac rhythm; and

selectively ~~controlling~~ control the recording of diagnostic data based on the cardiac rhythm and the trigger parameters.

4. (currently amended) The ~~method~~ device of claim 3 wherein the trigger parameters include threshold values against which features of the cardiac rhythm are compared.

5. (currently amended) The ~~method~~ device of claim 4 wherein the threshold values include one or more of: heart rate variability threshold values, morphology threshold values, and fast beat threshold values.

6. (currently amended) The ~~method~~ device of claim 4 wherein ~~the step of~~ to adaptively ~~modifying~~ modify the recording triggers ~~includes the step of~~ the processor is further operative to selectively ~~adjusting~~ adjust the threshold values so as to reduce the likelihood of any unnecessary recording of diagnostic data.

7. (currently amended) The ~~method~~ device of claim 1 wherein ~~the step of~~ to adaptively ~~modifying~~ modify the recording triggers ~~includes the step of~~ the processor is further operative to:

~~determining~~ determine whether the recording triggers were properly indicative of circumstances wherein diagnostic data is to be recorded; and

if not, ~~adjusting~~ adjust the recording triggers to more effectively represent circumstances wherein diagnostic data is to be recorded.

8. (currently amended) The ~~method~~ device of claim 7 wherein the recording triggers are indicative of the onset of an arrhythmia and wherein the recording triggers are adjusted based upon whether an arrhythmia in fact occurred.

9. (currently amended) The ~~method~~ device of claim 1 wherein ~~the step of~~ to selectively ~~recording~~ record diagnostic data upon the detection of predetermined recording triggers ~~includes the steps of~~ the processor is further operative to:

~~evaluating~~ evaluate the likelihood that circumstances will arise wherein diagnostic medical data is to be recorded; and

~~controlling~~ control the recording of diagnostic data based upon such an evaluation.

10. (currently amended) The ~~method~~ device of claim 9 wherein ~~the step of evaluating~~ to evaluate the likelihood that circumstances will arise wherein diagnostic medical data is to be recorded ~~is performed~~ the processor is further operative to identify periods of time wherein there is an elevated risk of an arrhythmia and wherein ~~the step of controlling~~ to control the recording of diagnostic data ~~is performed~~ the processor is further operative to record the data at least temporarily during the period of time wherein there is an elevated risk of an arrhythmia.

11. (currently amended) The ~~method~~ device of claim 10 wherein ~~the step of identifying~~ to identify periods of time wherein there is an elevated risk of an arrhythmia ~~is performed by monitoring~~ the processor is further operative to monitor heart rate variability and ~~identifying~~ to identify periods of time with reduced heart rate variability.

12. (currently amended) The ~~method~~ device of claim 9 wherein ~~the step of evaluating~~ to evaluate the likelihood that circumstances will arise wherein diagnostic medical data is to be recorded ~~is performed~~ the processor is further operative to predict the onset of an arrhythmia and wherein ~~the step of controlling~~ to control the recording of diagnostic data ~~is performed~~ the processor is further operative to activate recording prior to the predicted onset of the arrhythmia.

13. (currently amended) The ~~method~~ device of claim 12 wherein ~~the step of predicting~~ to predict the onset of an arrhythmia ~~is performed by monitoring~~ the processor is further operative to monitor cardiac rhythm.

14. (currently amended) The ~~method~~ device of claim 13 wherein ~~the step of monitoring~~ to monitor cardiac rhythm to predict the onset of an arrhythmia ~~includes the step of~~ the processor is further operative to:

~~examining~~ examine the morphology of heart beats and ~~predicting~~ predict the onset of an arrhythmia based on detection of a significant change in morphology.

15. (currently amended) The ~~method~~ device of claim 8 wherein ~~the step of evaluating~~ to evaluate the likelihood that circumstances will arise wherein diagnostic medical data is to be recorded ~~is performed~~ the processor is further operative to detect the onset of an arrhythmia and wherein ~~the step of controlling~~ to control the recording of diagnostic data ~~is performed~~ the processor is further operative to activate recording upon detection of the onset of the arrhythmia.

16. (currently amended) The ~~method~~ device of claim 15 wherein ~~the step of monitoring~~ to monitor cardiac rhythm to detect the onset of an arrhythmia ~~includes the step of~~ the processor is further operative to:

~~counting~~ count a number of beats occurring at a rate above a predetermined rate threshold and ~~detecting~~ detect the onset of an arrhythmia based on detection of a predetermined number of beats having a rate above the rate threshold.

17. (currently amended) The ~~method~~ device of claim 16 wherein the predetermined number of beats having a rate above the rate threshold is in the range of one to three beats.

18. (currently amended) The ~~method~~ device of claim 16 ~~further the including the step of confirming~~ wherein the processor is further operative to confirm that an arrhythmia actually occurred and, if the arrhythmia is not confirmed, ~~deactivating~~ deactivate the recording of diagnostic data.

19. (currently amended) The ~~method~~ device of claim 15 wherein ~~the step of~~ to adaptively ~~modifying~~ modify the recording triggers so as to reduce the likelihood of any unnecessary recording of diagnostic data ~~includes the steps, performed if the arrhythmia is not confirmed of~~ the processor is further operative to selectively ~~incrementing~~ increment the number of beats required to trigger activation of the recording of diagnostic data, if the arrhythmia is not confirmed.

20. (currently amended) The ~~method~~ device of claim 19 wherein the processor is further operative to ~~the number of beats required to trigger activation of the recording of diagnostic data is~~ selectively ~~incremented~~ increment the number of beats required to trigger activation of the recording of diagnostic data upon detection of two consecutive episodes wherein the recording of diagnostic data was activated but the arrhythmia was not subsequently confirmed.

21. (canceled)

22. (currently amended) The ~~method~~ device of claim 1 wherein ~~the step of~~ to selectively ~~recording~~ record diagnostic data upon the detection of predetermined recording triggers indicative of circumstances wherein diagnostic data is to be recorded ~~includes the steps of~~ the processor is further operative to:

~~activating~~ activate the recording of diagnostic data in a temporary memory upon the detection of predetermined recording triggers; and

~~transferring~~ transfer data from the temporary memory to long-term memory upon subsequent confirmation that such circumstances actually occurred.

23. (currently amended) A method ~~for controlling the recording of diagnostic data within~~ performed by an implantable medical device, the method comprising ~~the steps of~~:

evaluating the likelihood that circumstances will arise wherein diagnostic medical data is to be recorded;

controlling the recording of diagnostic data based upon such an evaluation;

determining whether the circumstances wherein diagnostic medical data is to be recorded actually occurred; and

adaptively modifying parameters employed to evaluate the likelihood of such circumstances so as to reduce the risk of unnecessarily recording of diagnostic data.

24. (currently amended) ~~A system for controlling the recording of diagnostic data within an~~ An implantable medical device~~, the system~~ comprising:

a memory operative to record diagnostic medical data; and

an adaptive-based diagnostic controller operative to selectively record diagnostic data in the memory upon the detection of predetermined recording triggers and further operative to adaptively modifying the recording triggers so as to reduce the likelihood of any unnecessary recording of diagnostic data.

25. (original) A system for adaptively controlling the recording of diagnostic data within an implantable medical device comprising:

means for storing data;

means for selectively recording diagnostic data within the means for storing upon the detection of predetermined recording triggers indicative of circumstances wherein diagnostic data is to be recorded; and

means for adaptively modifying the recording triggers so as to reduce the likelihood of any unnecessary recording of diagnostic data.